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Claims:

- 1) A method of providing operational power to a battery powered utilization device, said method comprising:
- a) monitoring operational battery pack characteristics;
  - b) storing said characteristics in an electronic memory device contained within said battery pack as battery pack data;
  - c) monitoring present battery pack conditions;
  - d) retrieving said battery pack data;
  - e) communicating said present battery pack conditions and said battery pack data to said battery powered utilization device; and
  - f) controlling by said portable utilization device, operational discharge of the battery pack.

2) The method of claim 1 wherein the step of controlling comprises powering down circuitry when it is not needed.

3) The method of claim 2 wherein the circuitry is located in the portable utilization device.

4) The method of claim 2 wherein the circuitry comprises at least one ROM.

5) The method of claim 2 wherein the circuitry comprises battery charge circuitry.

6) The method of claim 2 wherein the circuitry comprises battery deep discharge circuitry.

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A2 7) The method of claim 1 wherein the step of controlling comprises entering a low power mode.

7 6  
8) The method of claim 7 wherein at least a portion of the portable utilization device operates using a standby voltage lower than a normal operating voltage.

8 6  
9) The method of claim 7 wherein run speed is reduced.

9 6  
10) The method of claim 7 wherein at least one function is turned off when not needed.

10 9  
11) The method of claim 10 wherein a processor clock is stopped.

11 1  
12) The method of claim 11 wherein a processor is powered down.

12 6  
13) The method of claim 12 wherein a screen backlight is shut off.

13 6  
14) The method of claim 13 wherein power is removed from at least one peripheral device.

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A3 15) The method of claim 1 wherein the step of controlling comprises deselecting at least one battery of the battery pack.

16) A method of providing operational power to a portable utilization device, said method comprising:

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electronic memory device  
battery pack data related  
battery pack with the port  
to battery pack condition  
battery pack data;  
information based on the  
used on the battery pack  
portable utilization d  
and portable utilization  
charge of the battery pa

- 17) The method of claim 16 wherein the step of controlling comprises powering down circuitry when it is not needed.

<sup>17</sup> ~~19~~ The method of claim <sup>15</sup> ~~17~~ wherein the circuitry comprises at least one ROM.

<sup>19</sup>  
~~21~~ The method of claim <sup>15</sup>~~17~~ wherein the circuitry comprises  
battery deep discharge circuitry.

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<sup>21</sup>  
~~23~~) The method of claim <sup>28</sup>~~22~~ wherein at least a portion of the portable utilization device operates using a standby voltage lower than a normal operating voltage.

<sup>22</sup>  
~~24~~) The method of claim <sup>20</sup>~~22~~ wherein run speed is reduced.

<sup>23</sup>  
~~25~~) The method of claim <sup>20</sup>~~22~~ wherein at least one function is turned off when not needed.

<sup>24</sup>  
~~26~~) The method of claim <sup>23</sup>~~25~~ wherein a processor clock is stopped.

<sup>25</sup>  
~~27~~) The method of claim <sup>20</sup>~~22~~ wherein a processor is powered down.

<sup>26</sup>  
~~28~~) The method of claim <sup>20</sup>~~22~~ wherein a screen backlight is shut off.

<sup>27</sup>  
~~29~~) The method of claim <sup>20</sup>~~22~~ wherein power is removed from at least one peripheral device.

<sup>Sub</sup>  
~~30~~) The method of claim ~~16~~ wherein the step of controlling comprises deselecting at least one battery of the battery pack.

31) A method of providing operational power to a portable utilization device, said method comprising;  
a) coupling a battery pack with an electronic memory system and with processing circuitry of the portable utilization device;

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- 32) The method of claim 31 wherein the step of controlling comprises powering down circuitry when it is not needed.

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- 37) The method of claim 31 wherein the step of controlling comprises entering a low power mode.



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38) The method of claim ~~37~~ wherein at least a portion of the portable utilization device operates using a standby voltage lower than a normal operating voltage.

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~~39~~ The method of claim ~~37~~ wherein run speed is reduced.

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~~40~~ The method of claim ~~37~~ wherein at least one function is turned off when not needed.

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~~41~~ The method of claim ~~40~~ wherein a processor clock is stopped.

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~~42~~ The method of claim ~~37~~ wherein a processor is powered down.

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~~43~~ The method of claim ~~37~~ wherein a screen backlight is shut off.

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~~44~~ The method of claim ~~37~~ wherein power is removed from at least one peripheral device.

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The method of claim ~~31~~ wherein the step of controlling comprises deselecting at least one battery of the battery pack.

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